Safety in Numbers
Using Statistics to Make the Transportation System Safer

Research Project #2

Develop Common Criteria for Injury and Fatality Reporting

Develop Common Criteria for Injury and Fatality Reporting

Objectives

- Recommend common injury coding standards across transportation modes
- Develop uniform event definitions
- Develop common injury reporting criteria
- Provide sufficiently robust data to:
  - Develop mitigation strategies
  - Prioritize research and resource allocation

Develop Common Criteria for Injury and Fatality Reporting

General Approach

- Form working group
- Inventory DOT and selected non-DOT databases
- Describe current definitions/processes/ injury coding schemes
- Develop recommendations for a common scheme

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Purpose of Injury Reporting

- Help determine incident severity and cost
- Provide objective basis for development of injury mitigation/prevention strategies
- Provide basis for management decisions
  - Resource prioritization
  - Resource allocation
  - Research

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Elements of Injury Reporting

- Injury location
  - Body region/organ system
  - Aspect
- Injury type/description
- Injury severity
- Injury cause/mechanism

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Findings

- High degree of variability among databases:
  - Event definition
  - Injury definitions
  - Inclusion criteria
  - Investigation methodology
  - Injury reporting

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Findings (Cont.)

- Little or no coordination between agencies
- Reporting criteria range from rudimentary to highly sophisticated
- Definitions and scope frequently established by statutory mandates
- AIS is the most prevalent injury coding scheme

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Recommendations

- Reportable event
  - Transportation incident
  - Defined as previously noted
- Transportation-related injury
  - Any injury requiring medical attention beyond first aid incurred as the result of a reportable event
  - First aid-emergency treatment pending definitive medical care

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Recommendations

- Fatality definition
  - Fatality resulting from injuries sustained in a transportation incident when the death occurs within 30 days of the incident
- Uninjured
  - Uninjured persons involved in a transportation incident should be reported

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Recommendations

- Injury Coding
- Adopt a system similar to the NASS CDS
  - Minimum elements for each injury:
    - Source of recorded injury data
    - Complete AIS 90 code
    - Injury Aspect 1
    - Injury Aspect 2
    - Multiple mechanism fields

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Recommendations

- Injury aspect
  - AIS does not include aspect information
  - Locating the injury to right-left, inferior-superior, anterior-posterior is important to determining injury mechanisms
  - Use of several fields more accurately describes location

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Recommendations

- Injury mechanism
  - Attributes trauma to the physical source of injury
  - Essential for the determination of prevention strategies
    - If you do not know what caused the injury, how can you prevent it?
  - Basic coding structure can be applied to all modes
  - Specific codes will be unique to each mode

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Recommendations

- Statistical Sampling
  - Should consider opportunities for statistical sampling of incidents within modes
  - Requires a relatively high volume of incidents
  - Currently utilized by NASS CDS
  - Probably practical for general aviation and recreational boating

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Recommendations

- Database linkage
  - Consider opportunities for linkage to other databases
    - Hospital
    - Vital statistics
    - Other medical databases

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Conclusions

- Adoption of the Working Group recommendations will require considerable change for most modes
- Changes are essential for establishing a robust injury surveillance system able to support the vision of the DOT